DOCKET NO: UPAP0011-100 (K-1765) **PATENT**
Serial No.: 09/622,452 **Filed: October 31, 2000**

IN THE CLAIMS:

Please delete claims 20-22 and add new claims 40-42.

Upon entry of this amendment, claims 1-4, 6, 7, 9-15, 17, 18 and 33-36 and 40-45 will be pending.

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. **(previously presented)** A pyrogen-free composition comprising a plasmid comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements and a nucleotide sequence that encodes an immunomodulating protein operably linked to regulatory elements, wherein said immunomodulating protein is selected from the group consisting of: MCP-1, MIP-1α, MIP-1β, IL-8, and RANTES, L-selectin, P-selectin, E-selectin, CD34, GlyCAM-1, MadCAM-1, LFA-1, VLA-1, Mac-1, p150.95, PECAM, ICAM-1, ICAM-2, ICAM-3, CD2, LFA3, mutant forms of IL-18, CD40, CD40L, vascular growth factor, IL-7, nerve growth factor, vascular endothelial growth factor, Fas, TNF receptor, Flt, Apo-1, p55, WSL-1, DR3, TRAMP, Apo-3, AIR, LARD, NGRF, DR4, DR5, KILLER, TRAIL-R2, TRICK2, DR6, and Caspase ICE.

2. **(original)** The plasmid of claim 1 wherein said immunogen is a target protein that encodes a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases.

3. **(original)** The plasmid of claim 1 wherein said immunogen is a pathogen antigen.

4. **(original)** The plasmid of claim 1 wherein said immunogen is an HIV-1 antigen.

5. **(canceled)**

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6. **(original)** An injectable pharmaceutical composition comprising the plasmid of claim 1.

7. **(original)** A method of inducing an immune response in an individual against an immunogen comprising administering to said individual a plasmid of claim 1.

8. **(canceled)**

9. **(previously presented)** The plasmid of claim 1 wherein said immunogen is herpes simplex antigen HSV2gD.

10. **(previously presented)** An injectable pharmaceutical composition comprising the plasmid of claim 9.

11. **(previously presented)** A method of immunizing an individual against a herpes simplex virus infection comprising administering to said individual a plasmid of claim 9.

12. **(previously presented** A pyrogen-free composition comprising two plasmids:

a first plasmid comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements; and

a second plasmid comprising a nucleotide sequence that encodes an immunomodulating protein operably linked to regulatory elements, wherein said immunomodulating protein is selected from the group consisting of: MCP-1, MIP-1α, MIP-1p, IL-8, RANTES, L-selectin, P-selectin, E-selectin, CD34, GlyCAM-1, MadCAM-1, LFA-1, VLA-1, Mac-1, pl50.95, PECAM, ICAM-1, ICAM-2, ICAM-3,

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CD2, LFA-3, M-CSF, G-CSF, IL-4, mutant forms of IL-18, CD40, CD40L, vascular growth factor, IL-7, nerve growth factor, vascular endothelial growth factor, Fas, TNF receptor, Flt, Apo-1, p55, WSL-1, DR3, TRAMP, Apo-3, AIR, LARD, NGRF, DR4, DR5, KILLER, TRAIL-R2, TRICK2, DR6, and Caspase ICE.

13. **(original)** The composition of claim 12 wherein said immunogen is a target protein that encodes a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases.

14. **(original)** The composition of claim 12 wherein said immunogen is a pathogen antigen.

15. **(original)** The composition of claim 12 wherein said immunogen is an HIV-1 antigen.

16. **(canceled)**

17. **(original)** An injectable pharmaceutical composition comprising the composition of claim 12.

18. **(original)** A method of inducing an immune response in an individual against an immunogen, comprising administering to said individual a composition of claim 12.

19-32. **(canceled)**

33. **(previously presented)** A method of inducing an immune response in an individual against an immunogen comprising administering to said individual:

a nucleic acid molecule comprising a nucleotide sequence that encodes said immunogen operable linked to regulatory elements; and

a nucleic acid molecule comprising a nucleotide sequence that encodes said immunomodulating protein operably linked to regulatory elements, wherein said immunomodulating protein is selected from the group consisting of : MCP-1, MIP-1α, MIP-1β, IL-8, RANTES, L-selectin, P-selectin, E-selectin, CD34, GlyCAM-1, MadCAM-1, LFA-1, VLA-1, Mac-1, p150.95, PECAM, ICAM-1, ICAM-2, ICAM-3, CD2, LFA-3, M-CSF, G-CSF, IL-4, mutant forms of IL-18, CD40, CD40L, vascular growth factor, IL-7, nerve growth factor, vascular endothelial growth factor, Fas, TNF receptor, Flt, Apo-1, p55, WSL-1, DR3, TRAMP, Apo-3, AIR, LARD, NGRF, DR4, DR5, KILLER, TRAIL-R2, TRICK2, DR6, and Caspase ICE.

34. **(original)** The method of claim 33 wherein said immunogen is a target protein that encodes a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases.

35. **(previously presented)** The method of claim 33 wherein said immunogen is a pathogen antigen.

36. **(original)** The method of claim 33 wherein said immunogen is an HIV-1 antigen.

37-39 **(canccled)**

40. **(new)** The plasmid of claim 1 wherein said immunogen is a viral antigen.

41. **(new)** The method of claim 12 wherein said immunogen is a viral antigen.

42. **(new)** The composition of claim 12 wherein said immunogen is herpes simplex antigen HSV2gD.

43. **(new)** An injectable pharmaceutical composition comprising the composition of claim 42.

44. **(new)** A method of immunizing an individual against a herpes simplex virus infection comprising administering to said individual a composition of claim 42.

45. **(new)** The method of claim 33 wherein said immunogen is a viral antigen.

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